FLORIDA ATLANTIC UNIVERSITY

Climate Change: MYTHS, REALITIES & SOLUTIONS | EVR 4114| 42610

Number Credit Hours: 3

Instructor: Professor Colin Polsky
Term: Spring 2018
Office: SE 417 (Boca); DW 312 (Davie)
Office Hours: Wed/Fri 11-12 & by appt.
Class Meeting Days: Wed, Fri
Class Meeting Hours: 9:30-10:50 a.m.
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TA Office Hours: Wed, Fri 11a.m.-1p.m.

I. Welcome!

Welcome to our course! We are delighted that you've joined us for an even-handed, non-partisan perspective on one of society's most pressing and prominent issues: climate change.

II. Course Description

Information about climate change can come from a variety of sources and is often conflicting and confusing. Whom and what should you believe? How can you distinguish between the myths and the reality of climate change? In this course, you will learn the science behind our changing climate. You will also learn the common arguments and how to discern the truth. Finally, you will learn about how we can build resilient communities that not only will mitigate and adapt, but also will thrive.

III. Course Prerequisites/Co-requisites

There are no course prerequisites or co-requisites.

IV. Required Texts and Materials

- Kitchen, David, 2014. Global Climate Change, Turning Knowledge Into Action. Routledge: New York.
- The Instructor will also assign and provide other required readings.

V. Supplementary readings

As determined by the Instructor.

VI. Course Objectives

By the end of the course, students should be able to:

- Discuss how global temperatures have changed over time, from millions of years ago to the present, as well as the causes (both natural and anthropogenic) for these changes;
- Understand the scientific processes driving our changing climate;
- Identify some of the leading ways in which scientists analyze climate data;
- Analyze the variety of specific scientific and policy arguments presented by people on both sides of the issue; and

- Articulate the ways in which humans are creating solutions to solve our climate crisis.

VII. Course Evaluation

Undergraduate Grading and Evaluation	% of Final
10 Short Essays (2% each)	20%
Attendance and Participation	20%
3 Mid-Semester Exams (15% each)	45%
Final Exam (Not cumulative)	15%

VIII. Course Grading Scale

The following is the grading scale for the course:

A 91-100	B 81-86	C 71-76	D 61-66
A- 90	B- 80	C- 70	D- 60
B+ 87-89	C+ 77-79	D+ 67-69	F <60

Extra credit: Extra credit is not accepted in this course.

IX. Course requirements

Essays: Throughout the semester, you will complete 10 short essays (2-4 paragraphs). Each of these will be graded and worth a total of 2 percentage points each.

Attendance and Participation: One fifth of your grade is based on your attendance and your thoughtful participation.

Exams: There will be four exams, three given during the semester, and one (not cumulative) during the final exams period. Exams will be composed of a combination of formats, such as multiple choice, matching, fill-in-the-blank, and diagram interpretation.

X. Policy on make-up exams and incompletes grades

Make-up Exams: Make-up exams will only be given for a verifiable excuse with documentation, to be decided at the discretion of the Instructor. If the Instructor declines a request for a make-up exam, the student will earn a zero for the exam. Make-up exams may not resemble the original exam.

Incomplete Grades: The grade of I (incomplete) shall ONLY be given for the reasons listed and under the conditions specified in the FAU course catalog (http://www.fau.edu/academic/registrar/catalog/academics.php).

XI. Classroom Etiquette Policy

All cell phones and other electronic devices must be turned off prior to lecture. There will be plenty of interaction in the class with each other and the Instructor, and please feel free to ask questions, but do not chat during lectures. Students are responsible for informing themselves about the Honor Code standards before performing any academic work. The link to more detailed information about academic honesty can be found at: http://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf

Scholastic dishonesty includes, among other things: plagiarism (which includes copying and pasting material from the internet), copying other's work during a test, and using notes during a test. The Instructor reserves the right to check all written work for plagiarism. Any test or written assignment for which you are caught cheating will be marked as a zero grade, and the incident will be reported in

accordance with Honor Code regulations.

XII. Attendance Policy

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the Instructor. The effect of absences upon grades is determined by the Instructor, and the University reserves the right to deal at any time with individual cases of non-attendance.

Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the Instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

XIII. Disability Policy Statement

In compliance with the Americans with Disabilities Act (ADA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie, and Jupiter, however, disability services are available for students on all campuses.

XIV. Code of Academic Integrity Policy Statement

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001.

XV. Course Outline

The topics and assignments in this table are subject to change. Any changes will be communicated in advance via email and/or in class. The student is responsible for completing the correct assignments.

	Dates (W & F 930-1050a)	**Topic**	**Assignments to be completed *prior* to specified class day**
Week 1	Jan 10	Course introduction: What is climate change? Why were there sperm whales near Orlando? Who is Köppen? Comparing Cocoa Beach and Orlando.	
	Jan 12	Climate-Society interactions	Kitchen, pp.4-10 & 24-30; Watch these climate-society videos: human evolution, Columbia U., & fly fishing
Week 2	Jan 17	Climate trends: 20th & 21st Centuries	Data analysis to prepare for in-class discussion; watch continentality video; write short essay on climate-society interactions
	Jan 19	Climate trends: 20th & 21st Centuries	Submit your assignment from Jan. 17th class exercise and short essay on continentality; watch Köppen climate classification video; Read Kitchen, pp.43-51 and Appendix D
Week 3	Jan 24	Climate trends: last 800k yrs; deep history	Kitchen, pp.135-6 & 160-73; write 2 short essays: 1.one on Alley video and, 2. One on the "domino effect" (Jan 19 lecture)
	Jan 26	Climate trends: last 25k yrs	Kitchen, pp.200-7; write a short essay on Mann & Steyn "Hockey Stick" videos
Week 4	Jan 31	Climate Science history: the smartest guys in the 1800s – Fourier, Tyndall, and Arrhenius	Excerpts from Hay (provided as PDF), watch solar system temps video
	Feb 2	**Synthesis**	Study for Exam 1
Week 5	Feb 7	**EXAM 1**	
	Feb 9	Global energy budget	Kitchen, Ch.3; write short essay on electromagnetic radiation video
Week 6	Feb 14	General circulation cells. Teleconnections.	Kitchen, Ch.4
	Feb 16	Radiative forcing and natural GHG emissions (and C cycle, rock weathering)	Kitchen, Ch.4
Week 7	Feb 21	Climate "sensitivity," projections, & uncertainties	Kitchen, Ch.4; write short essay on radiative forcing
	Feb 23	Anthropogenic GHG emissions & solutions: the "Inventory" perspective	TBD
Week 8	Feb 28	**Synthesis**	Study for Exam 2
	Mar 2	**EXAM 2**	
Week 9	Mar 5-9	SPRING BREAK	
Week 10	Mar 14	Skepticism or Denialism?	Kitchen, Ch.8; write short essay summarizing a skeptic's position and a denier's position
	Mar 16	Skepticism or Denialism?	Kitchen, Ch.8

Week 11	Mar 21	Sea-Level Rise: the Exxon evidence	Kitchen, pp.237-244 + Ch.2; Haq et al. supplements
	Mar 23	Sea-Level Rise: the Florida case I (observations)	Hine et al. book chapters
Week 12	Mar 28	**Synthesis**	Study for Exam 3
	Mar 30	**EXAM 3**	
Week 13	Apr 4	Sea-Level Rise: the Florida case II (impacts)	Kitchen; write short essay on Dangerously video
	Apr 6	Sea-Level Rise: the Florida case III (adaptations)	Broward County & Compact resources
Week 14	Apr 11	Energy: background on fossil fuels & renewables	Kitchen, Ch.9; watch the following videos: coal, energy sources
	Apr 13	Recent renewables market trends & developments	Watch the following videos: clean coal, making electricity w coal; write a short essay on coal
Week 15	Apr 18	Policy incentives (both micro (e.g., PACE) and macro (e.g., Cap-and-Trade))	
	Apr 20	**Synthesis (LAST DAY OF CLASS)**	Study for Final Exam
Week 16	Apr 25	Reading day	Study for Final Exam
	Apr 27	Reading day	Study for Final Exam
Week 17	May 2	**FINAL EXAM**	NOTE DIFFERENT TIME – 7:45am!

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